V-2001A-E
SINGLE ZONE (PLUS) PAGE CONTROL UNIT

INTRODUCTION

The V-2001A-E Page Control Unit is manufactured by Valcom, Inc.

The V-2001A-E provides telephone system access to a single zone of one-way paging.

"WARNING: To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture."

"WARNING: Shock Hazard - Do Not Open."

"AVIS: Risque de Choc Electrique ne pas Ouvrir."

"PELIGRO: Corriente Electrica - No Abra."

"CAUTION: To reduce the risk of fire replace only with same type 1A, 125V fuse. 1A, 125V may be replaced by a 0.5A, 250V provided voltage selector is set for 230V."

"DANGER: Afin de réduire le risque de feu, remplacez le fusible par le même type de fusible à 1A, 125V. On peut utiliser un fusible à 0.5A, 250V pourvu que le sélecteur dalimentation soit fixé sur 230V. Ne pas ouvrir."

"VORSICHT: Zur verringerung von feuergefahr die sicherung nur mit derselben type 1A, 125V ersetzen. Statt 1A, 125V Kann 0.5A, 250V Benutzt werden, vorausgesetzt, die spannung ist auf 230V eingestellt. Nicht öffnen."

"PELIGRO: Para reducir el peligro de incendio remplazarlo unicamente con un fusible del mismo tipo 1A, 125V. El fusible de 1A, 125V podra ser remplazado por uno de 0.5A, 250V si el selector de voltaje esta puesto en 230V. No abres."

SPECIFICATIONS

Access Methods

- Electronic Key System (C. O. Line Position)
- PABX (Loop or Earth Call Trunk Port)
  1A2 Key Systems (400 type line card required)
- 600 Ohm Page Port
- Stand Alone Handset(s) (Used for access of the V-2001A-E only)

Features

- Page override capability (Using C. O. line position or loop start trunk port)
- Switchable battery feed for loop start operation
- RJ11 for "A" and "B" connections
- AGC on all voice outputs
- Provides audio for up to 150 Valcom one-way amplified speaker assemblies
- Background music input
- Voice operated VOX to mute music during page
- Optional contact closure activation
- Easily accessible music and tone volume controls
- Removable screw terminal connectors provided
- Supplies 20 Valcom power units (1 Amp -24VDC) for powering speaker amplifier assemblies
- Page with music outputs (2 provided) music mutes during page
- Page without music output
- Time clock/single tone (Contact closure activated)

- Night ring/warble tone
  (Closure or 90VAC activated)
  Priority sequence of tones:
  Page overrides music
  Night ring mixes with music and page
  Time clock mixes with music and page
- Individual switches for selection of night ring and time clock tones per output
- May be used with 25 or 70 Volt amplifiers
- AC powered, 230 or 115VAC
- Internationally recognized power connector
- AC input fused at 0.5 Amp @ 230VAC, 50 Hz or 1 Amp @ 115VAC, 60 Hz
- 115/230 Volt selector switch for international use
- UL listed

Dimensions/Weight

- 7.10" H x 9.00" W x 2.40" D
  (18.03cm H x 22.86cm W x 6.10cm D)
- 3.7 lbs. (1.68kg)

Nominal Specifications

Input Impedance:	600 Ohms
Input Level:	-10dBm nominal
Voice Switch Sensitivity:	-21dBm
Music Source Input Impedance:	8 to 600 Ohms
Music Input Level:	-10dBm nominal
Output Impedance:	8 Ohms
Output Level:	-10dBm nominal
DC Output:	1 Amp at -24VDC

Nominal Power Requirements

Voltage:	Current:
230VAC	0.5 Amp
115VAC	1 Amp

The V-2001A-E is equipped with a standard 3-prong polarized MOLEX connector to allow connection of a battery backup supply in case of AC power failure.

- Use a cord set consis ting of a minimum 18 AWG cord and grounding type attachment plug rated a minimum of 15A, 250V. The cord set should have the appropriate safety approvals for the country in which the equipment will be installed and should be marked HAR.
- The socket outlet shall be installed near the equipment and shall be easily accessible.

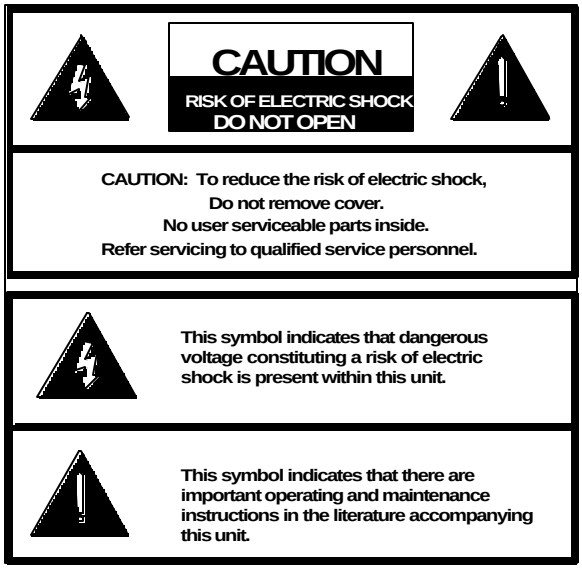
Environment

Temperature:	0 to 40 Degrees C
Humidity:	0 to 85% non-precipitating

INSTALLATION

NOTE: The telephone system referred to in this manual is the customer premise equipment such as an electronic key system, a PABX or a dedicated single line telephone set(s). The V-2001A-E is not intended for direct or indirect connection to the public telephone network or to PABX analog station ports. When used with a customer premise telephone system such as a key system or PABX system, these units are interfaced to the system via a fully protected page port or system central office port, which is a fully protected interface device. Also, the host system must be configured to disallow central office trunk conferencing in order to prevent indirect connection to the public network.

Precautionary Designations


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: To reduce the risk of electric shock,
Do not remove cover.
No user serviceable parts inside.
Refer servicing to qualified service personnel.
This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.
This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Mounting

The V-2001A-E was designed for wall or table mounting. Secure unit to wall studs or a suitable brace away from heat sources or strong magnetic fields (Motors, fans, power supplies, etc.) with the control and terminal strip accessible. Four wood screws are included for mounting.

Power Connections

NOTE: This equipment must be installed near an AC power outlet due to the power cord being used as a disconnect device.

The V-2001A-E may be used with one of the following:

- NEMA 5-15 cordset for North American use;
- CEE/7 cordset for Continental European use;
- BS1363 cordset for United Kingdom use.

- Connect cordset to unit via IEC 320 female connector located on one end of the cordset to IEC 320 male appliance coupler located on the V-2001A-E.
- For 115VAC use, verify fuse rating of 1 Amp and voltage selector switch displays 115V.
- For 230VAC use, verify fuse rating of 0.5 Amp and voltage selector switch displays 230V.
- After all required connections have been made, plug the cordset into appropriate AC wall outlet.

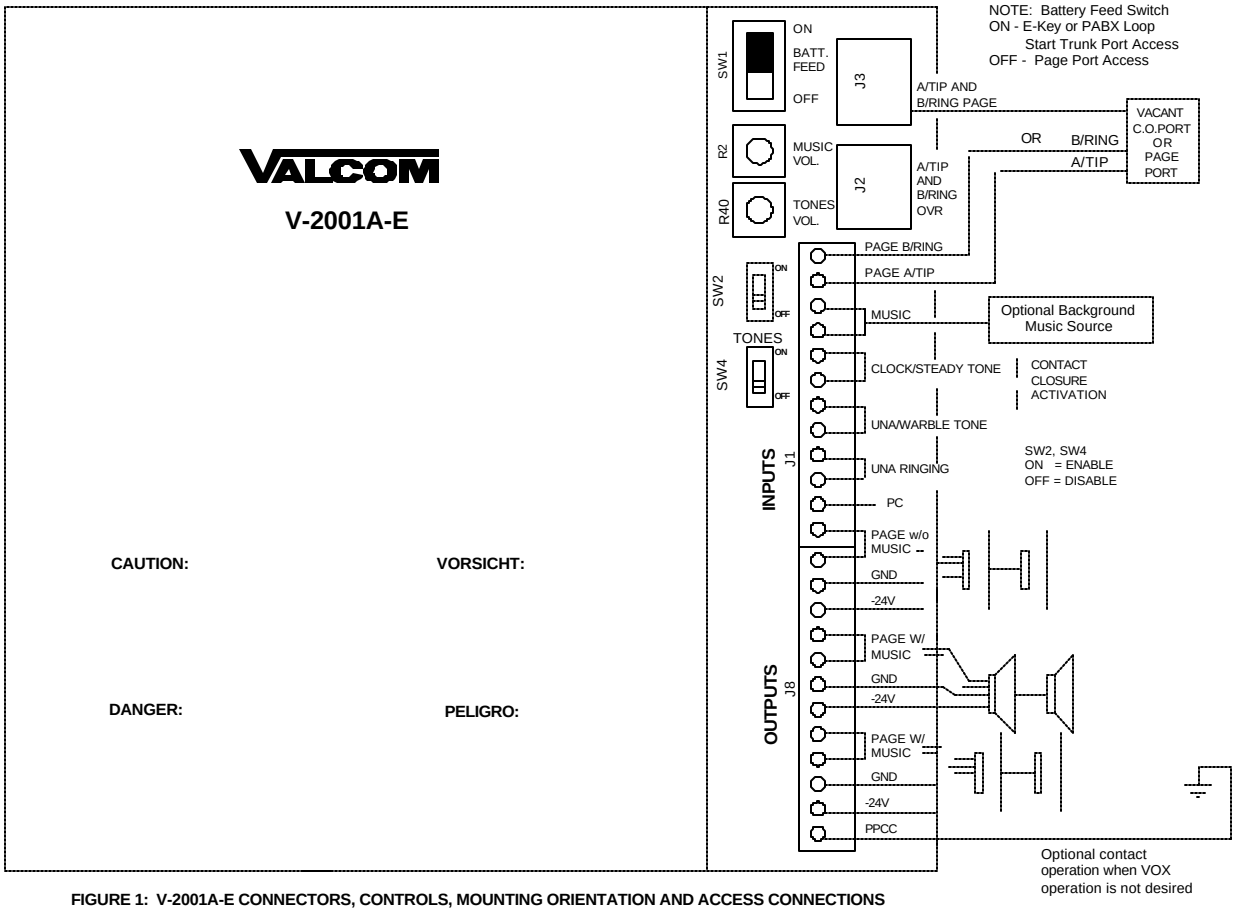


FIGURE 1: V-2001A-E CONNECTORS, CONTROLS, MOUNTING ORIENTATION AND ACCESS CONNECTIONS

CONNECTIONS

Refer to Figure 1.

Electronic Key or PABX Access

When using the V-2001A-E with an electronic key system C. O. line position or PABX trunk port, the battery feed switch (SW1) must be ON.

Operation: Press line key (Electronic key system) or dial trunk access code (PABX) to connect to the paging speakers. Make announcement. The V-2001A-E automatically disconnects from page.

Page Port Access

When accessing the V-2001A-E from a telephone system page port, the battery feed switch (SW1) must be OFF.

Operation: Follow the telephone system manufacturer's instructions for access to external paging. Make announcement. The V-2001A-E automatically disconnects from page.

The V-2001A-E voice switching circuit is activated when the person making the page begins to speak. When the page is completed or the person stops

speaking for more than two seconds, the paging circuit turns off. Other functions of the unit remain the same.

Background Music

Background music may be connected to the V-2001A-E when using either access method. Background music mutes on the "page + music" outputs when a page is made.

A single tone (Time clock) over paging is provided when the V-2001A-E is connected to a contact closure.

Operation: SW4 enables or disables single and warble tones on the page with music output. SW2 enables or disables single tones and warble tones on the page without music output only.

Page Override

Page override requires the use of a vacant C. O. line position, vacant loop start trunk port or dedicated single line telephone set for access (In addition to the page port, vacant C. O. line position or vacant loop start trunk port used for primary access of the V-2001A-E).

Using a modular telephone cord, connect the V-2001A-E RJ11 jack labeled "Tip and Ring OVR" to the phone system vacant C. O. line position or vacant loop start trunk port.

Operation: Press line key (Electronic key system) or dial trunk access code (PABX) for page override access to connect to paging speakers (Overriding page in progress). Make announcement. The V-2001A-E disconnects when phone is hung up, re-establishing the overridden page announcement.

Connection of One-Way Amplified Speakers

The Valcom V-2001A-E provides external power of 20 power units (1 Amp, -24VDC) to operate one-way amplified speakers. Additional power supplies are required for a quantity of speakers using over 20 power units. When using additional power supplies, make certain:

1) The -24VDC outputs are not connected to each other.
2) Each speaker is connected to only one power source.

Connect the output of a low level music source to the screw terminals marked "Music" on the input terminal strip on the V-2001A-E. Adjust music volume control on the V-2001A-E to the desired level.

Night Ring and Single Tones

Night ringing (Electronic warble tone) over paging is activated by a common audible contact closure or 90VAC ring voltage.

Volume Adjustments

The page volume is set by the speakers. Adjust speakers 1/3 to 1/2 volume initially; test and reset, if necessary, for correct page volume.

There are two volume controls for individual adjustment of:

- Background music
- Tones (Warble/single tone)

Clockwise adjustment increases volume, counter clockwise decreases volume.

TECHNICAL ASSISTANCE

When trouble is reported, verify power is being supplied to the unit and there are no broken connections. Check voltages for proper polarity to the one-way amplified speakers. Table 1 identifies symptoms of some possible problems with solutions. If a spare unit is available, substitute a spare unit for the suspected defective unit.

Assistance in troubleshooting is available from the factory. When calling, you should have a telephone test set, several clip leads and a VOM available, and be calling from the job site. Call (540) 563-2000 and ask for Technical Support, or call (540) 767-1555 for Valcom 24-hour Faxback System or visit our website at http://www.valcom.com.

Should repairs be necessary, contact your local distributor for instructions.

TROUBLESHOOTING CHART	
SYMPTOMS	***PROBABLE CAUSES AND SOLUTIONS***
1. No output to speakers	A. Check for the presence of audio on the page outputs of the V-2001A-E during a page using a test set. Refer to installation section for connection information. B. Check AC line fuse on V-2001A-E.
2. No music output	A. Using a test set, check for music on the music input terminals. B. Check that speakers are connected to “page + music” outputs.
3. No warble tone output	A. If a contact closure is provided by the telephone system, use an Ohm meter to check the continuity of the contact closure when they are operated when a call is ringing into the telephone system. B. If ringing is used, with an AC Volt meter, check for the presence of ring voltage when a call is ringing into the telephone system. C. Check selector switches (SW2 and SW4).
4. No single tone output	A. Using an Ohm meter, check the contact closure on the device that is to operate the single tone. B. Check selector switches (SW2 and SW4).

NOTE: The contact closure operation of the V-2001A-E can be tested with a length of wire connected between the two terminals of either the UNA/warble or clock/steady tone inputs.

VALCOM U.K. WARRANTY

This product, bearing the "VALCOM" trademark, excluding the batteries, is guaranteed by the manufacturer for the period of one year from the date of purchase and will, during this period, be repaired or replaced (with the same or a similar model), at our option, free of charge, if there is any defect due to faulty materials or workmanship. This guarantee does not cover defects arising from accidental damage, misuse or wear and tear, and is available only to the original purchaser of the product from an official "VALCOM" distributor or dealer.

This guarantee applies to all Valcom products purchased and used in the EEC. Products should be returned to your nearest Valcom distributor or dealer. If, however, the product has not been purchased in the EEC country where the distributor or dealer is located, the customer may be advised to return the product to the EEC country where the purchase originated, if parts are unavailable, or there are other unavoidable circumstances which hinder, or prevent service being given under guarantee.

Any person claiming under this guarantee must, on returning the product, supply proof of the date of purchase and a brief description of the nature of the fault.

NOTE: PROOF OF PURCHASE WILL BE ACCEPTED IN THE FORM OF EITHER THE ORIGINAL RECEIPT OF PURCHASE OR THIS GUARANTEE CERTIFICATE AND SUCH RECEIPT OR CERTIFICATE MUST BEAR THE DISTRIBUTOR OR DEALERS OFFICIAL STAMP AND THE DATE OF PURCHASE.

Charges will be made for all repairs unless either the purchase receipt or the stamped and dated Guarantee Certificate is returned with the product.

The guarantee does not effect the Statutory Rights of the customer.